

What is claimed is:

1. A drilling shoe configured to be coupled to a casing section, said drilling shoe comprising:

a fixed section adapted to be coupled to the casing section; and

a rotatable section coupled to the fixed section,

said drilling shoe being shiftable between a rotatable configuration and a locked configuration, said rotatable section being rotatable relative to the fixed section when the drilling shoe is in the rotatable configuration, said rotatable section being rotationally fixed relative to the fixed section when the drilling shoe is in the locked configuration.

2. The drilling shoe of claim 1, said drilling shoe being shiftable from the rotatable configuration into the locked configuration by axially shifting the rotatable and fixed sections relative to one another.

3. The drilling shoe of claim 1, said fixed and rotatable sections being telescopically intercoupled.

4. The drilling shoe of claim 1, said fixed section having first and second fixed ends, said rotatable section having first and second rotatable ends, said first fixed end being configured to be coupled to the casing section, said second fixed end and said first rotatable end being coupled to one another.

5. The drilling shoe of claim 4, one of said second fixed end and said first rotatable end presenting a projection, the other of said second fixed end and said first rotatable end presenting a recess, said projection being received in said recess when the drilling shoe is in the locked configuration to thereby prevent relative rotation of the fixed and rotatable sections,

said projection being removed from the recess when the drilling shoe is in the rotatable configuration to thereby permit relative rotation of the fixed and rotatable sections.

5 6. The drilling shoe of claim 4,
said rotatable section including a drillable drill bit rigidly coupled to the second rotatable end.

10 7. The drilling shoe of claim 6,
said drill bit including a valve for controlling fluid flow therethrough.

8. The drilling shoe of claim 1,
said drilling shoe being biased towards the rotatable configuration.

15 9. The drilling shoe of claim 1,
said drilling shoe comprising a compression spring disposed between at least a portion of the fixed section and at least a portion of the rotatable section and operable to bias the drilling shoe towards the rotatable configuration.

20 10. The drilling shoe of claim 1,
said rotatable section including an internal drive member defining a splined opening.

11. The drilling shoe of claim 1,
said fixed section being threadably coupled to the casing section.

12. A drilling apparatus coupled with a section of casing, said drilling apparatus comprising:

a drilling shoe selectively rotatable relative to the casing section, said shoe including a drillable bit; and

a locking mechanism for preventing rotation of the shoe relative to the casing section so that the bit can be drilled out after the casing section is set.

13. The apparatus of claim 12, said shoe being undetachable from the casing while the casing and the shoe are positioned down hole.

14. The apparatus of claim 12, said shoe comprising a fixed section and a rotatable section, said locking mechanism comprising two sets of interlockable teeth, one of said sets attached to the fixed section and the other of said sets attached to the rotatable section.

15. The apparatus of claim 14, said teeth being unlocked during rotation of the shoe relative to the casing and interlocked during drilling out of the bit after the casing section is set.

16. The apparatus of claim 14, said locking mechanism further including a spring biasing the teeth apart during rotation of the shoe relative to the casing.

17. The apparatus of claim 12, said shoe including a drive section for powered rotation of the shoe relative to the casing.

18. The apparatus of claim 17, said drive section comprising a plurality of splines and a complementary drive shaft configured for releaseable engagement with the splines.

19. The apparatus of claim 18,
said apparatus further including a mud motor for powering the drive shaft.

20. The apparatus of claim 12,
said drillable bit including first and second valves for controlling the flow of fluid
therethrough.

21. A method comprising the steps of:

- (a) coupling a drilling shoe to an end of a casing section;
- (b) using the drilling shoe to drill a borehole in a subterranean formation by rotating a rotatable portion of the drilling shoe relative to the casing section; and
- (c) locking the drilling shoe so that relative rotation of the casing section and the rotatable portion is inhibited.

22. The method of claim 21; and

- (d) while the drilling shoe is locked, drilling out the drilling shoe to thereby permit fluid flow therethrough.

23. The method of claim 22,

- said rotatable portion of the drilling shoe including a drill bit,
- step (b) including using the drill bit to drill the borehole,
- step (d) including drilling out the drill bit.

24. The method of claim 22; and

- (e) subsequent to step (b) and prior to step (d), cementing the casing by passing cement downwardly through the casing section and out of the drilling shoe.

25. The method of claim 24,

- steps (b) and (e) being performed without removing the casing section or the drilling shoe from the borehole.

26. The method of claim 24; and

- (f) producing fluids from the subterranean formation through the drilling shoe.

27. The method of claim 26,

- steps (b), (c), (d), (e), and (f) being performed without removing the casing section or the drilling shoe from the borehole.

28. The method of claim 21,
said drilling shoe including a non-rotatable portion telescopically intercoupled with
the rotatable section,
step (c) including axially shifting the rotatable and non-rotatable portions relative to
one another.

29. The method of claim 21,
step (c) including mechanically locking the rotatable portion of the drilling shoe
relative to the casing section.

30. The method of claim 29,
said non-rotatable section having first and second fixed ends,
said rotatable section having first and second rotatable ends,
one of said second fixed end and said first rotatable end presenting a projection,
the other of said second fixed end and said first rotatable end presenting a recess,
step (c) including inserting the projection into the recess.

31. The method of claim 21, step (b) being performed while
simultaneously rotating the casing.

32. A method of drilling and completing a well comprising the steps of:

(a) providing an apparatus comprising a section of casing, a drilling shoe, and a locking mechanism, said drilling shoe being coupled to the section of casing, said drilling shoe including a drillable drill bit;

5 (b) rotating said shoe relative to the section of casing to thereby drill a well bore to a desired depth;

(c) cementing said section of casing into place; and

(d) drilling out at least a portion of said drillable bit by a subsequent drilling operation,

10 said locking mechanism preventing rotation of the shoe relative to the section of casing during step (d).

33. The method of claim 32,

said drilling shoe comprising a fixed section that is telescopically intercoupled with

15 a rotatable section, said fixed and rotatable sections being axially shiftable relative to one another.

34. The method of claim 33,

said locking mechanism comprising two sets of interlockable teeth, one of said sets

20 attached to the fixed section and the other of said sets attached to the rotatable section.

35. The method of claim 34,

said teeth being unlocked during step (b) and interlocked during step (d).

25

36. The method of claim 34,

said locking mechanism further including a spring biasing the teeth apart during step

(b).

37. The method of claim 32,

said drillable bit including first and second valves for controlling the flow of fluid

30 therethrough.

38. The method of claim 32, step (b) being performed while simultaneously rotating the casing.